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ABSTRACT

Fourteen elementary teachers evaluated the quality and usefulness of 146 tapes produced by the Clinton Pilot Cassette Center, Minneapolis, Minn. Teachers' opinions rather than tests on students, were the basis of the ratings. Judging from the ratings, most of the cassettes appear suitable for use with educationally disadvantaged youth and were in keeping with the intent of Title I guidelines. Also the general quality and content of the tapes were rated good. Cassette tapes recorded from radio broadcasts or purchased from other school districts were not as good for use with poor readers as those tapes purchased from commercial sources or produced at the cassette center. Commercial tapes were better technically, but center tapes were better for use with poor readers and also provided more "settling down" time for students at the start of the tapes. Since two-thirds of the tapes were rated more suitable for intermediate than primary grade children, more emphasis may need to be placed on making tapes for the lower grades. Cassette materials were judged by 70% of the raters to be more effective than other instructional materials for teaching the subject to disabled readers. A list of rated tapes, along with recommendations and evaluations, is included. (Author/JK)

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Teachers' Ratings of Cassettes Developed At The Clinton Pilot Cassette Center Clinton Elementary School Summer 1971

A Title I, ESEA Project

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and
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Ideas expressed in this report do not necessarily reflect the official position of the Minneapolis Public School Administration nor the Minneapolis School Board.

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Minneapolis Public Schools

Teachers' Ratings of Cassettes Developed at the Clinton Pilot Cassette Center Clinton Elementary Schools Summer 1971

Summary

During the summer of 1971 fourteen Minneapolis Elementary School teachers participated in a workshop to evaluate the quality and appropriateness of audio tapes produced by the Clinton Pilot Cassette Center. The goal of the Cassette Center is to improve instruction for children who learn better by simultaneously listening and viewing than they do by reading. The Center tries to reach this goal by producing filmstrips and audio tapes which help disabled readers succeed in school subjects despite their reading difficulties.

The evaluation of the Cassette Center tapes was concerned with the quality and usefulness of the tapes themselves as viewed by teachers. During a two week summer workshop teachers rated 146 Cassette Center tapes which had been randomly drawn from the Cassette Center tape library. Only teachers' views and opinions of the tapes were sought since students were not in school. No attempt was made to assess how efficiently or effectively the tapes were used during the regular school year nor was an attempt made to determine if students who used the tapes made significant improvement in basic skills subject areas.

On the basis of the ratings made by the teachers, it appears that most of the cassette tapes were suitable for use with educationally disadvantaged youth and were in keeping with the intent and purpose of Title I ESEA guidelines. In addition, general quality and content of the tapes were rated good.

Cassette tapes recorded from radio broadcasts or purchased from other school districts were not as good for use with poor readers as those tapes purchased from commercial sources or those made by the Cassette Center. Commercially produced tapes had better technical quality than Cassette Center produced tapes, but Cassette Center tapes were rated better for use with poor readers. Cassette Center tapes were also much better than the other two types of cassette productions in the amount of "settling down" time provided students at the beginning of the tape.

Four subject areas were evaluated: Language arts, social studies, mathematics and science. Most of the science tapes were found to be too difficult for use with K-6 grade level children. Mathematics was judged to be superior to the other

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See page 31

subjects in the skills or concepts presented, but was found to be in need of improvement in the interest level of the tapes. Language arts tapes needed more improvement than the other subjects in helping disabled readers learn the subject presented on the tape. See page 31

Since two-thirds of the tapes were rated to be more suitable for intermediate than primary grade level children, a question can be raised as to whether more emphasis needs to be placed on producing tapes for the primary grades. See page 33

The cassette materials were judged by 70% of the ratings to be more effective than most other kinds of instructional materials for teaching the subject to disabled readers. See page 31

Appendix B lists those tapes which should be modified, those that should be scrapped, and those which should be kept without change or modification. Appendix C lists each tape separately along with each rater's recommendation and evaluation. See page 32

A number of recommendations are given. See page 33

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Minneapolis Public Schools

Teachers' Ratings of Cassettes Developed
at the Clinton Pilot Cassette Center
Clinton Elementary School
Summer 1971

The Clinton Pilot Cassette Center, located at Clinton Elementary School in Minneapolis, began operation on January 19, 1970 through a Title I ESEA initial grant of $9,825. A continuation grant of $36,383 was funded for fiscal year 1971. The Center was planned to provide improved educational opportunities for target area children who were a year or more below grade level in reading achievement through extensive, effective, and multiple use of cassette tapes. Since poor readers have a great deal of difficulty reading printed material it was felt that listening-viewing activities would be a more appropriate mode of learning for poor readers.

The major effort of the Center's staff (consisting of an audio-visual coordinator, resource teacher, and a clerk) since its inception has been to produce a library of cassette tapes suitable for small group instruction and individual student use. The teachers and the students at Clinton help to record tapes as it is felt that using many different voices prevents the tapes from becoming monotonous. Music is frequently used to introduce a lesson or to provide background. To date, over 600 tapes and related instructional materials in language arts, literature, mathematics, science, social studies, music and physical education, have been purchased or produced for use with primary and intermediate age children. The tapes and related materials have been coded, boxed, and labeled for efficient circulation to the Clinton faculty and students.

From October 15, 1970 to May 28, 1971 over 8,100 cassette tapes were checked out of the Center's library by teachers and students for instructional or individual student use. Students may check out tapes and take them home or use them in school in the same manner they check out library books. Every afternoon, Monday through Thursday, students were allowed to take a cassette recorder and two tapes home. Only two tape recorders are available for overnight use in each classroom. In addition, each classroom had a listening center where children, using headphones, could listen to the tapes.

A major focus of the project was to provide students with opportunities to actually achieve success over and over, thus building their self confidence. It was hoped that the net result would be better student attitudes toward school and self as well as improved school achievement.

Objectives

The major objectives of the Clinton Cassette Project were:

1. To develop a library of cassette tapes for class, small group, and individual listening which will be suitable for use with educationally disadvantaged youth.

2. To develop cassette tapes which are suitable for the many filmstrips now available for disabled readers.

3. To assist students in developing competency in listening skills related to basic skills achievement.

4. To help students acquire competency in learning, and gain skill in the techniques of inquiry and critical examination.

5. To act as a resource agency for persons needing help in the efficient use of cassette tapes as an instructional and learning aid.

6. To help children create their own lesson (interviews, class reports, book reviews).

7. To help children learn from lessons presented via cassette recorders in their classrooms.

8. To bring optional instructional methods to the classroom not otherwise possible; children would learn by listening as well as by reading.

Program Description

The goal of the Cassette Pilot Center was to develop a tape library that would help improve instruction for children who learn better by simultaneous listening and viewing than by reading so that disabled readers would not fail in other basic skills areas. The project served primarily 40% of the 376 children at Clinton Elementary School who achieved at the twenty-fifth percentile or lower on standard achievement tests in reading and mathematics.

The Clinton Cassette materials and tapes were produced by several methods: First, tapes were produced in the Center's recording studio with the help of teachers and sometimes students. Secondly, the Center purchased tapes from various commercial enterprises and modified them when needed to suit local purposes. Thirdly, radio programs that appeared to be suitable for the Center's purposes were either recorded or purchased by the Center and modified when needed. Finally, in several instances the Center bought tapes which were produced by other school districts.

Cassette materials including filmstrips, tapes, transparencies, slides and mimeographed materials were used for instruction in class, small groups and individual listening. Many of the recorded lessons were geared to students' textbooks in science, social studies, language arts and math. Thus students who were poor readers and who easily became frustrated and discouraged when reading a lesson, could listen to the lesson being read to them on tape and follow along in the textbook. Poems, short stories, readings in literature and even practice in multiplication tables were available for student use and could be taken home for overnight listening and study.

The Center's staff prepared and developed cassette materials, helped teachers and students use the materials and equipment effectively, and organized and maintained the cassette library so that teachers and students could easily retrieve appropriate tape and related materials. Frequently, supplementary materials such as filmstrips, mimeographed worksheets etc., were included in the box containing the cassette tapes.

Evaluation

One of the Cassette Center's major purposes was to develop a library of cassette tape lessons which would be suitable for use with Title I, ESEA students. The evaluation of the Center's operations was restricted to an analysis of the quality and usefulness of the cassette tapes themselves as viewed by teachers. The study was conducted during a two week summer workshop by 14 teachers who rated 146 Cassette Center tapes which had been randomly drawn from the Cassette Center tape library. Only teacher views and opinions of the tapes were sought since students were not in school. Thus, no attempt was made to assess how efficiently or effectively the tapes were used during the regular school year and no attempt was made to determine if students who used the tapes made significant improvement in basic skills subject areas. The evaluation has attempted to provide answers to the following questions:

1. Which cassettes appeared to be well suited for teaching youngsters who are educationally disadvantaged and therefore should be retained as a part of the library?
2. Which cassettes needed changes in order to be maintained and what kind of changes should be made?
3. Which cassettes should be discarded because of their limited usefulness for teaching educationally disadvantaged youngsters?
4. Do the cassettes in a given subject area, such as social studies, appear to present more difficulties than cassettes in any of the other subject areas such as mathematics or language arts?
5. Do the cassettes produced by the Clinton Cassette Center measure up to cassettes which were produced commercially? How do the cassettes measure up to the tapes bought or recorded from radio broadcasts and those tapes which were purchased from other school districts?
6. Are there any consistent kinds of problems with the cassettes such as sound quality, length of presentation, content interest, etc.?

In order to achieve the above objectives it was determined that a representative sampling of each of the major subject areas (language arts, mathematics, social studies and science) cassette tapes be taken and that the tapes be rated or evaluated by a knowledgeable group of teachers who had previous instructional experience with youngsters for whom the cassettes were intended.

Fourteen teachers were selected to conduct the cassette tape evaluation. Each principal from the 14 Title I South Pyramid elementary schools which included two parochial schools, chose one teacher to represent his school. (The South Pyramid is a geographically unified group of schools organized into a unit for decentralized planning and administration). Of the 14 teachers selected, all had four years teaching experience or more; four were primary teachers, eight were intermediate teachers and two were librarians.

One-hundred forty six cassettes were randomly selected for evaluation from a list of 481 tapes which the Center had on file in its library as of May 1, 1971. The sample accounted for 30% of the tapes in the four major subject areas. Table 1 indicates the breakdown for the sample and the number of tapes that were evaluated by subject area.

Table 1

Summary of Cassette Sampling Procedures by Subject Area, Number in Each Subject Area, Number Selected for Evaluation and Percent Sampled

Subject Area	Number	Number Selected	Percent Sampled
Language Arts and Literature	204	59	29
Social Studies	175	54	31
Mathematics	73	22	30
Science	29	11	38
Total	481	146	30

Beginning June 21, 1971 at the Clinton Elementary School, the 14 teacher raters were given a brief orientation on how to evaluate the tapes. A cassette rating sheet (see Appendix A for Cassette Evaluation by Teachers), developed by the Research Department in cooperation with the Clinton Cassette staff, was provided and each teacher was required to fill out one rating sheet for each tape evaluated. Typically, each tape was rated by four teachers although several tapes received fewer than four and several received more than four evaluations (see Table 2 for subject breakdown of number of ratings and Appendix C for the number of ratings for each individual tape).

Each day teachers were given rating sheets on which cassette numbers had been entered. The cassette numbers had been randomly assigned to assure that no bias entered into the order in which the teachers rated the tapes, thus teachers worked independently of one another. As an example, one rater might do a certain social studies cassette, then a science tape, then a math tape. Another teacher might be doing a social studies tape, a math tape and then a social studies tape. The teacher raters had no knowledge of the source of production of the tape.

The 14 raters worked ten days on the project. One-hundred forty six tapes were evaluated with 554 teacher ratings made about the tapes. Generally headsets were used by the teachers to listen to the tapes as is the case when individual children listen to the tapes in school. Ninety-two percent of the ratings were made by teachers using headsets. No instances were reported by the teachers which indicated trouble using the cassette recorders or headsets.

The section which follows presents the results of the teacher ratings.

Results

The results are presented in this section under three general headings.

The first section reports the results by subject areas: language arts, social studies, mathematics and science. Individual cassette evaluations and rater comments are recorded in Appendix C.

Section two describes the results by production source; i.e., whether the tapes were produced by the cassette center, by a commercial enterprise or recorded from radio or purchased from some other school district.

Section three reports the results according to whether the tapes were suitable for primary or intermediate grade level use.

Cassette Tapes Analyzed by Subject Area

Table 2 shows the number of tapes evaluated by subject area and the number of individual ratings made for each subject area. In all, 146 tapes were evaluated with a total of 554 ratings made. The average number of ratings for each tape was 3.9.

Table 2

Number of Tapes Evaluated, Total Number of Ratings and Mean Ratings by Subject Matter

Subject	Number Rated	Total Ratings	Mean Ratings For Each Tape
Language Arts	59	223	3.8
Social Studies	54	211	3.9
Mathematics	22	81	3.9
Science	11	39	3.9
Total	146	554	3.9

Table 3, page 9 presents the results by subject area when the teacher evaluators were asked to give a very good, good, fair or poor rating to each tape on

the following questions:

1. Was the voice clear?
2. Was the voice pleasant?
3. Was the sound good?
4. Was the pacing of the materials presented appropriate for the children?
5. Was the presentation of optimum length; neither too long nor too short?
6. Was sufficient "settling down" time provided at the beginning of the tape?
7. Was the content relevant for children?
8. Was the content interesting?
9. Were the related materials appropriate for the Cassette presentation?

Eight of the nine tape quality items had an overall rating of good or very good in 89% of the cases. The range for the eight criteria items was from 89% to 97% with good or very good ratings when all subjects were considered.

Only settling down time received less than 89% good or very good ratings. It was accorded a good or very good rating 74% of the time and received 17% poor ratings. Language arts settling time tapes received a poor rating 22% of the time by the evaluators while 67% of the ratings were good or very good on settling time. Social studies had 17% poor ratings, science 10%, and mathematics 6%.

Mathematics had a content interest rating of good or better 84% of the time, but had 17% poor or fair ratings.

Table 4 on page 11 reports the results by subject matter areas when the tapes were evaluated for their effectiveness in helping disabled readers learn the subject presented. Specifically, raters were asked to give a tape a very effective, effective, of limited effectiveness or worthless rating

Table 3

Frequency and Percent Distributions for All Subject Areas And By Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Rated on Nine Tape Quality Items[a]

Rating	All Subjects N	%	Language Arts N	%	Social Studies N	%	Mathematics N	%	Science N	%
Voice Clarity										
Very Good	287	52	120	54	112	53	34	42	21	54
Good	248	45	91	41	94	45	45	56	18	46
Fair	18	3	11	5	5	2	2	2	0	0
Poor	1	0	1	0	0	0	0	0	0	0
Total	554	100	223	100	211	100	81	100	39	100
Pleasantness of Voice										
Very Good	267	48	113	51	98	47	36	44	20	51
Good	249	45	90	40	99	47	44	54	16	41
Fair	35	6	19	9	12	6	1	1	3	8
Poor	2	0	1	0	1	0	0	0	0	0
Total	553	99	223	100	210	100	81	99	39	100
Sound Quality										
Very Good	265	48	102	45	102	48	39	48	22	56
Good	247	45	97	44	97	46	36	44	17	44
Fair	30	5	13	6	11	5	6	7	0	0
Poor	12	2	11	5	1	0	0	0	0	0
Total	554	100	223	100	211	99	81	99	39	100
Appropriateness of Pacing										
Very Good	250	45	99	44	95	45	36	44	20	51
Good	252	46	105	47	93	44	37	46	17	44
Fair	40	7	12	5	19	9	7	9	2	5
Poor	11	2	7	3	3	1	1	1	0	0
Total	553	100	223	99	210	99	81	100	39	100
Length of Presentation										
Very Good	243	44	103	47	92	44	33	41	15	38
Good	265	48	105	48	95	46	42	52	23	59
Fair	35	6	11	5	19	9	4	5	1	3
Poor	6	1	2	9	2	1	2	2	0	0
Total	549	99	221	99	208	100	81	100	39	100
Settling Time										
Very Good	211	39	75	34	81	39	40	49	15	38
Good	191	35	73	33	69	33	30	37	19	48
Fair	54	10	24	11	23	11	6	7	1	3
Poor	92	17	48	22	35	17	5	6	4	10
Total	548	101	220	100	208	100	81	99	39	99

Table 3 (continued)

Rating	All Subjects N	%	Language Arts N	%	Social Studies N	%	Mathematics N	%	Science N	%
Content Relevance										
Very Good	296	53	108	48	124	59	48	59	16	41
Good	218	39	95	43	71	34	31	38	21	54
Fair	34	6	17	8	13	6	2	2	2	5
Poor	6	1	3	1	3	1	0	0	0	0
Total	554	99	223	100	211	100	81	99	39	100
Content Interest										
Very Good	257	47	98	45	119	56	24	30	16	41
Good	243	44	101	46	78	37	43	54	21	54
Fair	44	8	18	8	13	6	11	14	2	5
Poor	5	1	2	1	1	0	2	3	0	0
Total	549	100	219	100	211	99	80	101	39	100
Appropriateness of Accompanying Materials										
Very Good	205	49	73	47	82	54	37	46	13	46
Good	166	40	68	43	49	32	37	46	12	43
Fair	32	8	8	5	17	11	4	5	3	11
Poor	14	3	8	5	3	2	3	4	0	0
Total	417	100	157	100	151	99	81	101	28	100

[a]N varies slightly in some instances because the raters failed to respond to an evaluation item. N is considerably smaller for appropriateness of accompanying materials than other rating categories because in many instances there were no accompanying materials for the cassette tapes. In some instances percent totals do not equal 100% because of rounding.

to the following question: In your opinion, how effective would this lesson be to help severely disabled readers learn the subject presented?

Table 4

Frequency and Percent Distributions for All Subject Areas and by Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Rated for Their Effectiveness in Helping Severely Disabled Readers Learn the Subject Presented

Ratings	All Subjects		Language Arts		Social Studies		Mathematics		Science	
	N	%	N	%	N	%	N	%	N	%
Very Effective	219	40	74	33	95	45	31	38	19	49
Effective	265	48	114	51	96	46	38	47	17	44
Of Limited Effectiveness	55	10	24	11	16	8	12	15	3	8
Worthless	14	2	11	5	3	1	0	0	0	0
Total[a]	553	100	223	100	210	100	81	100	39	101

[a]In some instances percentage totals do not equal 100% because of rounding.

When all subjects were considered, 88% of the tape ratings were judged as being effective or very effective in helping disabled readers learn the subject matter. Science tapes had a 93% effective or very effective rating, social studies 91%, mathematics 85%, and language arts 84%. Two percent of the ratings considered the tapes to be worthless as far as helping disabled readers learn subject matter.

Table 5 reports the results when the cassette tapes were compared with other instructional materials for teaching the subject to disabled readers. Raters were asked the following question: Compared with other instructional materials you have used, how would you rate this cassette for teaching the subject to disabled readers? The raters then checked one of the following responses: (1) The most effective material I know of for this subject, (2) More effective

than most materials on this subject, (3) About as effective as most other materials on this subject, (4) Less effective than most materials on this subject.

Table 5

Frequency and Percent Distributions For All Subject Areas And By Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Compared With Other Instructional Materials for Teaching The Subject to Disabled Readers

Rating	All Subjects N	%	Language Arts N	%	Social Studies N	%	Mathematics N	%	Science N	%
Most effective material I know of for this subject	95	17	29	13	44	21	12	15	10	26
More effective than most materials on this subject	296	53	117	52	116	55	42	52	21	54
About as effective as most other materials on this subject	124	22	63	28	36	17	20	25	5	13
Less effective than most materials on this subject	39	7	14	6	15	7	7	9	3	8
Total[a]	554	99	223	99	211	100	81	101	39	101

[a]In some instances percentage totals do not equal 100% because of rounding.

Seventy percent of the ratings reported that the cassette materials were more effective than most other instructional materials for teaching the various subjects to disabled readers. Seven percent indicated that the materials were less effective than other materials on the subject. In less than 10% of the cases did teachers feel that the cassette materials were less effective than most materials. Over 90% of the ratings judged the cassette materials to be at least as good as most other materials and 70% of the ratings indicated that the cassettes were either more effective or

the most effective materials that the raters had seen on the topics covered by the tapes.

Table 6 reports the findings when the 14 evaluators were asked to rate the appropriateness of the materials for poor, average, or better than average readers. A "poor" reader was defined as a child who is one or more years below grade level.

Table 6

Frequency and Percent Distributions for All Subject Areas And by Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Rated for Good, Average or Poor Readers

Rating	All Subjects		Language Arts		Social Studies		Mathematics		Science	
	N	%	N	%	N	%	N	%	N	%
More appropriate for poor readers than for average or better than average readers? (A "poor" reader is one or more years below grade level).	191	35	77	35	76	36	25	32	13	33
More appropriate for average or better than average readers than for poor readers	71	13	39	18	22	11	6	8	4	10
Appropriate for good, poor and average readers alike	277	51	203	47	108	52	44	56	22	56
Not appropriate for good, poor or average readers	7	1	1	0	3	1	3	4	0	0
Total[a]	546	100	220	100	209	100	78	100	39	99

[a] In some instances percentage totals do not equal 100% because of rounding.

Table 6 indicates that 35% of the ratings for all subject areas judged the tapes more appropriate for poor readers than for average or better than average readers. Fifty-one percent of the tape ratings were reported to be

appropriate for good, poor and average readers alike. Thus, 86% of the tape ratings indicated the cassettes to be suitable for poor readers. Eighty-two percent of the language arts ratings indicated that the tapes were suitable for use with poor readers, social studies had 88%, mathematics 88%, and science 89% favorable ratings. Only one percent of the ratings reported that the cassettes were not appropriate for good, poor or average readers.

Table 7 reports the results when the tapes were judged to see how important the skill, concept or information contained on the tape was for instruction.

Table 7

Frequency and Percent Distributions for All Subject Areas And by Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Rated To Determine How Important the Skill, Concept or Information Presented for Instruction Was in the Subject Area

Rating	All Subjects		Language Arts		Social Studies		Mathematics		Science	
	N	%	N	%	N	%	N	%	N	%
Crucial, can't do without it	79	14	28	13	23	11	25	31	3	8
Very important	272	49	109	49	99	47	44	54	20	51
Moderately important	192	35	81	36	84	40	22	15	15	38
Not very important	7	1	4	2	2	1	0	0	1	3
Trivial	4	1	1	0	3	1	0	0	0	0
Total[a]	554	100	223	100	211	100	81	100	39	100

[a] In some instances percentage totals do not equal 100% because of rounding.

Sixty-three percent of the ratings judged the tapes to be very important or crucial in regard to the skill, concept or information presented. Individual subject breakdowns were: Language arts 62%, social studies 58%, mathematics 85%, and science 59%. One percent or less of the tape ratings judged the tapes as not very important or trivial.

Table 8 reports the results when the teacher raters were asked the following question: What is your recommendation for this cassette presentation? (1) Keep it as is, (2) scrap it or (3) keep it, but make the following changes. Readers wanting to know what changes were recommended should see Appendix C which has each tape listed separately.

Table 8

Frequency and Percent Distributions for All Subject Areas And by Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Rated for Keeping Tape As Is, Scrapping It, or Modifying It

Rating	All Subjects		Language Arts		Social Studies		Mathematics		Science	
	N	%	N	%	N	%	N	%	N	%
Keep it as is	384	70	154	70	152	73	50	63	28	72
Scrap it	19	4	10	5	6	3	3	4	0	0
Keep, but modify	145	26	56	25	51	24	27	34	11	28
Total[a]	548	100	220	100	209	100	80	101	39	100

[a]In some instances percentage totals do not equal 100% because of rounding.

Seventy percent of the ratings recommended that the cassette tapes be maintained as they are. Mathematics had a keep rating of 63% which was the lowest of the subject areas. Social studies had the best rating with 73% of the raters recommending that the tapes should be kept in their present condition.

Four percent of the tape ratings had a scrap rating, with science having none and language arts (five percent) the highest.

The keep-but modify recommendation was made in 26% of the ratings, with science having none of these recommendations and mathematics having the largest (34%).

Table 9 indicates the number and percent of cassette tapes by subject area that received a unanimous recommendation on each tape by those rating it that it should be kept in its present condition or scrapped. Also listed are those tapes having one or more modify recommendations.

Table 9

Number and Percent of Cassette Tapes by Subject Area That Received a Unanimous Recommendation on Each Individual Tape by Those Rating That It Should Be Kept in Its Present Condition or Scrapped and Also Those Tapes Having One Or More Modify Recommendations

	All Subjects		Language Arts		Social Studies		Mathematics		Science	
Rating	N	%	N	%	N	%	N	%	N	%
Keep	45	31	19	32	19	35	5	23	2	18
Scrap	2	1	0	0	2	4	0	0	0	0
Modify	99	68	40	68	33	61	17	77	9	82
Total[a]	146	100	59	100	54	100	22	100	11	100

[a]In some instances percentage totals do not equal 100% because of rounding.

Table 9 indicates that 45 of the 146 tapes rated (31%) received a unanimous keep rating; that is, if a tape had four ratings all four ratings recommended keeping the tape without any modification whatsoever. Two tapes had a scrap recommendation (both in social studies) and 99 (68%) of the tapes had one or more recommendations recommending that the tape should be modified in some manner.

Language arts and science had the highest percentage of keep ratings with 32% and 35% respectively. Science and mathematics had the highest percentage of modify recommendations with science having 82% and mathematics 77%.

Cassette Tapes Analyzed by Production Source

The Cassette Center produces its own tapes, buys tapes from commercial enterprises and other school districts, as well as recording live radio broadcasts. For the purposes of this report the tapes have been placed into three groups and have been analyzed accordingly. The following describes the grouping procedure and abbreviations used in subsequent tables:

1. Local means that the tapes were produced by the Cassette Center.
2. Commercial means that the tapes were produced by a commercial enterprise which sells educational tapes for a profit.
3. Radio and other schools means that the tapes were recorded from a live radio broadcast or that the tape was produced and procurred from another school district.

Table 10 presents a breakdown of the various levels of production by subject area showing the number of tapes that were produced locally, commercially and by radio and other schools.

Table 10

Number and Percent of Cassettes by Production Source and Subject Matter

Subject	Local		Commercial		Radio and Other Schools	
	N	%	N	%	N	%
Language Arts	20	33	35	48	4	33
Mathematics	12	20	8	11	2	17
Science	4	7	7	10	0	0
Social Studies	25	41	23	32	6	50
Total[a]	61	101	73	101	12	100

[a]Percentage totals may not equal 100% because of rounding.

Table 10 shows that 61 tapes were produced locally, 73 commercially, and 12 by radio and other schools. Local and commercial productions had about the same percentage of tapes by subject matter. However, radio and

school productions had 50% of its tapes in social studies while not having any productions in science.

Table 11 shows the quality of tapes by production level using the nine criteria items given on page 8 .

Table 11

Frequency and Percent Distributions by Cassette Production Source on Nine Tape Quality Criteria Items[a]

Rating	Total N	Total %	Local N	Local %	Commercial N	Commercial %	Radio and Other N	Radio and Other %
Voice Clarity								
Very Good	283	52	94	42	134	64	55	47
Good	246	46	115	52	73	35	58	50
Fair	18	3	12	5	3	1	3	3
Poor	1	0	1	0	0	0	0	0
Total	548	101	222	99	210	100	116	100
Pleasantness of Voice								
Very Good	263	48	86	39	126	60	51	44
Good	248	45	111	50	79	38	58	50
Fair	34	6	23	10	4	2	7	6
Poor	2	0	1	0	1	0	0	0
Total	547	99	221	99	210	100	116	100
Sound Quality								
Very Good	262	48	93	42	122	58	47	41
Good	244	45	108	49	74	35	62	53
Fair	30	5	17	8	6	3	7	6
Poor	12	2	4	2	8	4	0	0
Total	548	100	222	101	210	100	116	100
Appropriateness of Pacing								
Very Good	248	45	92	41	112	53	44	38
Good	249	46	106	48	86	41	57	50
Fair	39	7	20	9	7	3	12	10
Poor	11	2	4	2	5	2	2	2
Total	547	100	222	100	210	99	115	100
Length of Presentation								
Very Good	240	44	86	39	109	52	45	39
Good	262	48	111	51	92	44	59	51
Fair	35	6	16	7	9	4	10	9
Poor	6	1	5	2	0	0	1	1
Total	543	99	218	99	210	100	115	100

Table 11 (continued)

Rating	Total N	Total %	Local N	Local %	Commercial N	Commercial %	Radio and Other N	Radio and Other %
Settling Time								
Very Good	210	39	129	59	58	28	23	20
Good	188	35	79	36	78	38	31	27
Fair	53	10	8	4	26	13	19	17
Poor	91	17	3	1	46	22	42	37
Total	542	101	219	100	208	101	115	101
Content Relevance								
Very Good	294	54	117	53	115	55	62	53
Good	214	39	88	40	81	39	45	39
Fair	34	6	14	6	13	6	7	6
Poor	6	1	3	1	1	0	2	2
Total	548	100	222	100	210	100	116	100
Content Interest								
Very Good	255	47	103	47	100	49	52	45
Good	239	44	96	43	89	43	54	47
Fair	44	8	18	8	16	8	10	9
Poor	5	1	4	2	1	0	0	0
Total	543	100	221	100	206	100	116	101
Appropriateness of Accompanying Materials								
Very Good	203	49	110	51	71	48	22	45
Good	164	40	88	41	61	41	15	31
Fair	32	8	15	7	10	7	7	14
Poor	14	3	2	1	7	5	5	10
Total	413	100	215	100	149	101	49	100

[a]N varies slightly in some instances because the raters failed to respond to an evaluation item. N is considerably smaller for appropriateness of accompanying materials than other rating categories because in many instances there were no accompanying materials for the Cassette tapes. In some instances percent totals do not equal 100% because of rounding.

If one looks at the ratings of good or better for the nine quality criteria items, little or no difference can be distinguished among the three production sources. With the exception of "settling time" and "appropriateness of related materials" all three production sources had a good or very good rating 88% or more of the time with an overall rating equal to or exceeding 91%.

Commercial productions had a higher percentage (10-20%) of very good ratings than either local or radio productions on the first five criteria items. However the commercial production ratings on settling time had only 66% good or very good ratings compared to local productions which had 95% of the ratings at or above the good rating level. Twenty-two percent of the commercial production ratings on "settling time" were judged to be poor. Radio and other school production had only 47% good or better ratings while having 37% poor ratings.

Radio and other school productions appear to be in need of improvement in the related materials department. Twenty-four percent of the ratings for related materials were fair or poor.

Table 12 reports the findings when the tapes were evaluated by production source to determine the source effect on helping disabled readers learn the subject presented,i.e. were local productions better than commercial and radio productions, were they the same or were commercial productions better for disabled readers than either of the other two productions? Table 12 indicates that apparently production source had little relationship to whether or not the cassettes were judged to be effective in helping disabled readers learn subject matter. It should be noted, however, that radio and other school productions were reported

to be somewhat less effective than the other two production sources with 16% of the ratings indicating limited effectiveness.

Table 12

Frequency and Percent Distributions for All Production Sources and by Local, Commercial, and Radio or Other Schools When the Cassette Tapes Were Rated for Their Effectiveness in Helping Severely Disabled Readers Learn the Subject Presented

Rating	All Productions		Local		Commercial		Radio and Other	
	N	%	N	%	N	%	N	%
Very Effective	216	39	90	41	86	41	40	35
Effective	262	48	112	50	96	46	54	47
Of Limited Effectiveness	55	10	18	8	19	9	18	16
Worthless	14	3	2	1	9	4	3	3
Total[a]	547	100	222	100	210	100	115	101

[a]In some instances percentage totals do not equal 100% because of rounding.

Table 13 reports the findings when the ratings were analyzed by source of cassette production to determine the cassette tapes effectiveness when compared to other instructional materials. The table indicates that the materials were about as effective regardless of production source; i.e., 70% of all productions were more effective or better than other materials the teacher raters had used for helping disabled readers. Local productions had 73% more effective or most effective ratings, commercial 73%, radio and other sources 64%.

Table 13

Frequency and Percent Distributions for All Production Sources And by Local, Commercial, and Radio or Other Schools When The Cassette Tapes Were Compared With Other Instructional Materials for Their Effectiveness in Teaching Disabled Readers

Rating	All Productions N	%	Local N	%	Commercial N	%	Radio and Other N	%
Most effective material I know for this subject	95	17	39	18	33	16	23	20
More effective than most material on this subject	292	53	122	55	119	57	51	44
About as effective as most other materials on this subject	122	22	50	23	42	20	30	26
Less effective than most materials on this subject	39	7	11	5	16	8	12	10
Total[a]	548	99	222	101	210	101	116	100

[a]Percentage totals may not equal 100% due to rounding.

Table 14 reports the results when the tapes were analyzed by production source to determine how effective the various sources are with poor, average, and good readers (A "poor reader" is a child who is one or more years below grade level).

Table 14

Frequency and Percent Distributions for All Production Sources And By Local, Commercial and Radio or Other Schools When the Cassette Tapes Were Rated for Their Effectiveness in Helping Poor, Average and Good Readers

Rating	All Productions N	%	Local N	%	Commercial N	%	Radio and Other N	%
More appropriate for poor readers than for average or better than average readers	190	35	100	46	60	29	30	26
More appropriate for average or better than average readers than for poor readers	69	13	13	6	32	16	24	21
Appropriate for good, poor and average readers alike	274	51	100	46	113	55	61	53
Not appropriate for good, poor, or average readers	7	1	6	3	1	0	0	0
Total[a]	540	100	219	101	206	100	115	100

[a]Percentage totals may not equal 100% due to rounding.

Thirty-five percent of the ratings for all productions indicated that the cassettes were more appropriate for poor readers than for average or better than average readers. Local productions were considerably better (46%) than either commercial (29%) or radio and other schools (26%) on this category. In addition, 32% of the commercial, and 21% of radio and other schools were judged to be more appropriate for average or better than average readers than for poor readers. Since only 13% of the local productions received this rating it appears that local productions do a better job of preparing tapes for poor readers. Little or no difference existed among production sources for the other two ratings.

Table 15 reports the findings when the tapes were analyzed by production source to determine how important the skill, concept or information contained on the cassettes were for instructional purposes.

Table 15

Frequency and Percent Distributions For All Production Sources and By Local, Commercial, and Radio or Other Schools When The Cassette Tapes Were Analyzed to See How Important the Skill, Concept or Information Presented on the Tape was For Instructional Purposes

Rating	All Productions		Local		Commercial		Radio and Other	
	N	%	N	%	N	%	N	%
Crucial, can't do without	79	14	30	14	37	18	12	10
Very important	268	49	111	50	102	49	55	47
Moderately important	190	35	76	34	68	32	46	40
Not very important	7	1	3	0	2	1	2	2
Trivial	4	1	2	1	1	0	1	1
Total[a]	548	100	222	99	210	100	116	100

[a]Percentage totals may not equal 100% due to rounding.

Table 15 indicates that no major differences existed among the three different production sources. The material contained in the cassettes was judged to be moderately important or better by 98% of the ratings. Very important and crucial ratings exceeded 57% in all levels of production with commercial (67%) the best and radio and other school productions the poorest (57%).

Table 16 presents the keep, scrap or modify recommendations when viewed from a production level; that is, was there a greater percentage of tapes for a certain production source that had a keep without modification rating than the other productions? Did one production source have more of its tapes with scrap recommendations?

Table 16

Frequency and Percent Distributions for all Productions and by Local, Commercial, Radio and Other Schools Productions When the Cassette Tapes were Rated Keep, Scrap or Modify

Rating	All Productions		Local		Commercial		Radio and Other	
	N	%	N	%	N	%	N	%
Keep it as is	380	70	157	72	149	71	74	65
Scrap it	19	4	7	3	7	3	5	4
Keep but modify	143	26	55	25	53	25	35	31
Total[a]	542	100	219	100	209	99	114	100

[a] In some instances percentage totals do not equal 100% because of rounding.

The mean keep rating for all productions was 70% with the Cassette Center productions having the best rating (72%) and radio and other schools (65%) the poorest.

Four percent of the ratings recommended that the tapes be scrapped with little variation among the three production sources.

Twenty-six percent of the tapes had a modify recommendation with local

and commercial productions having a 25% modify recommendation. Radio and other schools had 31% of the ratings recommending change or modification.

It appears that little difference existed between Cassette Center locally produced tapes and commercially produced tapes when viewed from a keep, scrap or modify rating. Radio and other school production had a higher modification rate and would seem to be somewhat poorer than the other two production sources when rated on a keep, scrap, or modify basis.

Cassette Tapes Analyzed By Primary and Intermediate Grade Level Usage

Table 17 reports the results when the tapes were judged for their suitability for use with primary (K-3) or intermediate (4-6) grade children by subject area.

Table 17

Frequency and Percent Distributions For All Subject Areas And by Language Arts, Social Studies, Mathematics and Science When the Cassette Tapes Were Rated for use With Primary and Intermediate Children

Rating	All Subjects		Language Arts		Social Studies		Mathematics		Science	
	N	%	N	%	N	%	N	%	N	%
Primary										
Very Good	116	24	71	37	24	13	15	22	6	16
Good	138	29	55	28	52	29	15	22	16	43
Fair	87	18	27	14	41	23	9	13	10	27
Poor	140	29	41	21	64	35	30	43	5	14
Total	481	100	194	100	181	100	69	100	37	100
Intermediate										
Very Good	257	48	85	41	111	53	43	54	18	46
Good	208	39	80	38	82	39	28	35	18	46
Fair	29	9	29	14	12	6	6	8	2	5
Poor	20	4	14	7	3	1	2	3	1	3
Total[a]	534	100	208	100	208	99	79	100	39	100

[a]In some instances percentage totals do not equal 100% because of rounding.

Table 17 reports that 53% of the ratings for the cassettes were good or very good for use with primary grade level children. Eighty-seven percent of the ratings indicated that the cassettes were good or very good for use with intermediate grade level children. In addition, 29% of the ratings indicated that the tapes as a whole were poor for use with primary children while only four percent of the ratings were reported as being poor for intermediate grade children.

Twenty-one percent of the language arts primary tape ratings were poor compared to only seven percent poor for intermediate level students.

Social studies primary had 42% good or very good ratings and 35% poor ratings compared to the intermediate level of 92% good or very good and only one percent poor ratings.

Mathematics primary grade ratings had 44% good or better and 43% poor compared to the intermediate level of 89% good or very good and three percent poor.

Science primary had 59% good or better and 14% poor ratings compared to intermediate science ratings of 92% good or very good and only three percent poor. Thus, at all subject levels, the raters judged the cassette materials to be more suitable for intermediate usage than for primary grade level usage.

Table 18 reports the results for usage according to source of production with primary and intermediate grades. The table indicates that a higher percentage of good or very good ratings was accorded to local (57%) and commercial (61%) productions than to radio and other sources (29%) when the sources were rated for use with primary grades. Ninety-three percent of the radio and other sources were given a good or better rating for use with intermediate age students; local and commercial productions had 86% and 85% respective ratings indicating good or very good ratings for usage with intermediate children.

Table 18

Frequency and Percent Distributions For All Production Sources And By Local, Commercial, and Radio or Other Schools When the Cassette Tapes Were Judged for Primary or Intermediate Grade Level Usage

Rating	All Productions		Local		Commercial		Radio and Other	
	N	%	N	%	N	%	N	%
Primary								
Very Good	115	24	51	26	58	31	6	6
Good	138	29	60	31	57	30	21	23
Fair	87	18	38	20	29	15	20	22
Poor	135	28	45	23	44	23	46	49
Total	475	99	194	100	188	99	93	100
Intermediate								
Very Good	253	48	103	48	94	47	56	49
Good	206	39	80	38	75	38	51	44
Fair	49	9	19	9	24	12	6	5
Poor	20	4	11	5	7	4	2	2
Total[a]	528	100	213	100	200	101	115	100

[a]In some instances percentage totals do not equal 100% because of rounding.

Table 19 presents a breakdown by subject area of the number of cassette tapes that had a good or better rating for usage with primary, intermediate, and both primary and intermediate level children. Also reported are those tapes which were judged not suitable for either primary or intermediate grade levels. The table indicates that more than twice as many cassettes were more suitable for intermediate grades than for primary grades. Fifty-one of the 146 cassettes (35%) were suitable for use with primary grade level children and 117 (80%) were suitable for intermediate level children. Thirteen or 9% of the tapes were reported as not being suitable for use with either primary or intermediate children (See Appendix B for individual tape grade level recommendation).

Table 19[a]

Number and Percent of Cassettes by Subject Area Rated Appropriate for Use With Primary, Intermediate, and Both Primary and Intermediate Grade Levels and Those Tapes Rated Not Appropriate for Either Primary or Intermediate Grade Level Use

Subject	Primary		Intermediate		Both Primary and Intermediate		Neither Primary or Intermediate		Total
	N	%	N	%	N	%	N	%	
Language Arts	13	81	26	32	16	46	4	31	59
Mathematics	1	6	14	18	6	17	1	8	22
Science	1	6	2	2	1	3	7	54	11
Social Studies	1	6	40	49	12	34	1	8	54
Total[b]	16	99	82	101	35	100	13	101	146

[a]A mean rating by the teacher evaluators of good or very good was required before a tape was rated as being suitable for primary and intermediate grade level use. Where a tape received a mean rating of good or very good for use with both primary and intermediate grade levels it was entered under column 4 (both primary and intermediate). When a tape received a mean rating of less than good for both primary and intermediate grade use it was placed under column 5.

[b]In some instances percentages totals do not equal 100% because of rounding.

Seven of 11 (63%) science tapes were reported not to be suitable for K-6 grade level use. However only 13 of the 146 tapes (9%) were reported as not being suitable for K-6 use.

Conclusions and Recommendations

The major purposes of this evaluation were to determine whether the general quality and content of the Clinton Cassette Project tapes were satisfactory as viewed by 14 teacher evaluators. It was also the intent of the evaluation to see if the tapes were suitable for use with those children qualifying under Title I ESEA guidelines. That is, those children who are one or more years below grade level in reading or mathematics achievement.

It should be emphasized that no direct attempt was made to determine how efficient or effective the tapes were for instructional purposes nor was any attempt made to determine if students that used the tapes made any significant improvement in basic skills subject areas.

Answers to the following questions were sought in the evaluation:

1. Which cassettes appeared to be well suited for teaching youngsters who are educationally disadvantaged and therefore should be retained as a part of the library?

2. Which cassettes needed changes in order to be maintained and what kind of changes should be made?

3. Which cassettes should be discarded because of their limited usefulness for teaching educationally disadvantaged youngsters?

4. Do the cassettes in a given subject area, such as social studies, appear to present more difficulties than cassettes in any of the other subject areas such as mathematics or language arts?

5. Do the cassettes produced by the Clinton Cassette Center measure up to cassettes which were produced commercially or by radio and other school districts?

6. Are there any consistent kinds of problems with the cassettes, such as sound quality, length of presentation, content interest, etc.?

In order to achieve the stated objectives, 14 teachers were selected to conduct the cassette tape evaluation. One teacher was selected from each of the 14 Title I South Pyramid elementary schools by the principal of the school where he/she taught. One-hundred forty-six tapes were evaluated

by the teachers using a cassette tape rating instrument developed by the Research Division of the Minneapolis Public Schools in cooperation with the Cassette Center (See Appendix A for the rating form used by the teachers).

Specific recommendations for objectives one through three are found in Appendix B. The following section discusses the remaining three objectives.

Conclusions

The general quality of the evaluated tapes was good. Ninety-one percent of the ratings and better, depending on the item rated, gave a good or very good rating to the following tape quality items: voice clarity, pleasantness of voice, sound quality, pacing of materials, length of presentation, content relevance, content interest and appropriateness of related materials. Little difference was noted among the four subject areas of language arts, social studies, mathematics and science when these areas were analyzed on the basis of the above stated tape quality items. All subject areas received similar good or very good ratings on the tape quality items. Mathematics was the only subject which deviated to any marked degree from the other subject areas and it was down only slightly in content interest having 17% fair and poor ratings.

The cassette tapes quality was down-graded to any marked extent on only one item--amount of "settling time." The overall rating for "settling time" was good or better on only 74% of the ratings. Language arts and social studies cassettes were reported in need of improvement in settling time. Language arts had 22% poor ratings and social studies 17%.

When the nine tape quality items were evaluated from a source of production standpoint (Cassette Center, commercial or radio and other school productions) the following conclusions seem to be warranted:

1. All three productions sources seem to produce fairly high quality tapes.

2. Commercially produced tapes were superior to the other two productions on five of the nine tape quality items evaluated.

3. Cassette Center tape productions were superior to the other two production sources on the amount of settling down time provided for students at the beginning of the cassette tape. Commercial and radio and other school productions were weak in this area and are in need of improvement.

When the cassettes were evaluated for their effectiveness in helping disabled readers learn the subject matter presented on the various tapes, 88% of the ratings judged the tapes to be effective or very effective. Little difference was observed among the various subject matter areas for this purpose. Science had the best rating with 93% of the ratings being effective or very effective. Language arts had the poorest ratings with 84% of the ratings reporting effective or better ratings. Thus, it appears that the tapes can be an effective tool for helping disabled readers learn subject matter.

Radio and other school productions were judged to be inferior to both Cassette Center and commercial productions when rated for their effectiveness in helping disabled readers learn the subject presented. Cassette Center tapes had 91% and commercial productions had 87% effective or very effective ratings compared to radio and other school production ratings of 82% effective or very effective.

When the cassette tapes were compared with other instructional materials for teaching the subject matter presented on the tapes to disabled readers, 70% of the ratings indicated that the cassette tapes were more effective than most other kinds of instructional materials on the subject covered by the tapes. Radio and other school productions were slightly inferior to those tapes produced either commercially or by the Cassette Center. Language arts and mathematic cassettes received fewer favorable ratings when compared with other instructional materials than either social studies or science tapes.

The cassette tapes were also rated for their suitability with poor, average, and good readers. Eighty-six percent of the ratings indicated that the tapes were suitable for use with poor readers. No differences existed among the various subject areas. Cassette Center produced tapes were superior to both of the other production sources when the tapes were compared for their use with poor readers. Radio and other school production tapes were slightly inferior to commercially produced tapes.

The 14 cassette tape evaluators also rated the importance of the skill, concept or information presented for instruction in the tapes. Ninety-eight percent of the ratings judged the tapes to be moderately important to crucial in importance. Sixty-three percent of the raters' responses judged the tapes to be very important or crucial. Individual subject areas which received a very important or crucial rating were language arts with 62% favorable responses, social studies 58%, mathematics 85%, and science 59%. The production sources had approximately the same ratings, thus, no major differences were found among the various production sources as each did about as well as the other.

The raters were asked to give an overall recommendation for each cassette presentation. They could respond by recommending that the tape be kept as is without change, they could recommend that the tape be scrapped or they could recommend that the tape be kept if certain changes or modifications were made. Seventy percent of the teacher ratings recommended that the cassette tapes be kept in their present condition and that no changes in the tapes were necessary. Only four percent of the ratings recommended that the tapes be scrapped while 26% of the ratings indicated that certain changes should be made on the tapes. No major differences existed among

the various subject areas although mathematics tapes received fewer keep ratings than any of the other subject areas which received about the same percentage of keep ratings. When production sources were compared on the keep rating, radio and other school productions were somewhat inferior to the other two production sources, i.e., radio and other schools received 65% keep ratings compared to Cassette Center production ratings of 72% and commercial productions of 71%.

The cassettes were also evaluated for use with primary (K-3) and intermediate (4-6) grade level children. The tapes were rated very good, good, fair or poor for use with the two levels. The ratings indicated that more than twice as many cassette tapes were more suitable for intermediate grades than for primary grade level children. Thirty-five percent of the tapes were suitable for use with primary grade levels compared to 80% for the intermediate grades. Nine percent of the tapes were reported as not being suitable for use with grades K-6. The reader should consult Appendix B or C for individual tape grade level recommendations.

Recommendations

It appears that the cassette tapes are suitable for use with educationally disadvantaged youth and are in keeping with the intent and purpose of Title I ESEA guidelines.

The recommendations which follow are made on the basis of teacher ratings which were made during a summer cassette tape evaluation workshop when students were not involved. Actual efficiency of the tapes was not directly evaluated. Individual tape recommendations are listed in Appendix C and should be consulted in light of the following suggestions:

1. Cassette tapes that were recorded from radio broadcasts or purchased from other school districts were generally inferior to commercial and Cassette Center productions and are in need of improvement in the following areas:

a. While the overall technical quality is fairly good, the amount of student settling down time provided at the beginning of the tape is very weak and definitely needs improvement.

b. Radio and other school productions were not as good as commercial and Cassette Center productions for helping disabled readers learn the subject matter presented on the tapes. In addition, a greater percentage of modification recommendations was accorded to radio and other school productions than either of the other two production sources. Therefore, the Cassette Center should carefully review these productions to see if there is a need for such productions since their overall effectiveness received relatively low ratings compared to the other two sources of production.

2. Commercial productions had superior ratings when compared with Cassette Center and radio and other school productions in their technical quality and were next to Cassette production in their suitability for use with poor readers. However, commercially produced tapes definitely need improvement in the amount of settling down time provided students at the beginning of the tape.

3. Cassette Center productions had good technical quality, but were not as good as those tapes which were produced commercially. The amount of settling down time provided at the beginning of the Cassette Center tapes was excellent, and these productions had the best ratings for helping poor readers learn the subject matter presented. Thus, the only area that might be in need of improvement is in the technical area such as voice clarity, sound, presentation length, etc. It should be emphasized, however, that the cassettes technical qualities were given a good rating and the question is one of excellence.

4. The following recommendations are made with respect to each subject area which was evaluated:

a. Language Arts - Some language arts tapes are in need of improvement for their effectiveness in helping disabled readers learn the subject matter presented on the tapes. In addition, language arts tapes produced by commercial or radio and other school districts need improvement in the amount of settling down time provided at the beginning of the tape.

b. Social Studies - Some social studies tapes are in need of improvement in the amount of settling time provided at the beginning of the tape when the tapes were produced by commercial or radio and other school districts.

c. Mathematics - Mathematic tapes were judged to be in need of improvement in making the tapes content more interesting. However, the skills or concepts presented were judged to be far superior to the other subject areas and only changes that increase the chances of making the tapes more interesting should be made. In addition, the clarity of the voice making the tapes could be improved.

d. Science - Of the eleven science tapes that were evaluated, seven (63%) were judged to be too difficult for K-6 grade level children. Future science tapes should be made less difficult and more suitable for K-6 grade levels.

5. Since there was not a great deal of difference between Cassette Center produced tapes and commercial productions, the cost factor for the two productions should be carefully scrutinized to determine which is the best value for the money invested in each type of production.

6. More than twice as many tapes were judged to be suitable for use with intermediate grades as for primary grades. Should the Center continue producing approximately one primary grade tape for every two intermediate grade level tape or should more emphasis be placed on producing more primary grade level tapes?

7. Appendix B lists tapes that are in need of modification. Modification should be made in light of the suggestion presented in Appendix B as well as the individual tape ratings presented in Appendix C.

8. Present and future tapes which are developed should have the teacher or child using it evaluate the tape so that any glaring errors can be corrected and so that future users can see the comments made. These should be filed with the tapes for ready reference.

9. The following suggestions are representative of the comments (found in Appendix C) the teacher evaluators made about the kinds of technical improvements that should be made in the tapes themselves and therefore should serve as a yardstick for buying or producing tapes:

   a. The vocabulary which is used in a tape needs explanation when it is of a technical nature such as in mathematics or science. Don't assume that children understand the meaning.

   b. Directions given to students should be made as simple, clear and concise as possible.

   c. Children should be instructed to turn off the recorder when they are given time to do work on their own. This way they don't have to wait if they finish before the speaker starts again or they can take more time if needed.

When they have completed their work they can turn on the tape. Less tape is needed and it does away with the guess work of knowing how much time to allow before the speaker begins speaking.

d. Music used in the tapes is a very desirable feature and should continue to be used whenever possible.

e. Related materials should be mimeographed, or offset rather than dittoed because they are easier to read and maintain their permanence better.

f. When questions are asked about the story read, it is better to intersperse the story with several thought questions rather than having all the questions at the end of the tape.

g. It is always desirable to have motivation questions or discussion at the beginning of the tape.

h. Mathematics tapes should emphasize the why as well as the how.

i. Stories with pictures are desirable for poor readers.

j. In some instances the tone bell had too much reverberation. Perhaps some other signal or cue could be used or at least a tone bell with less reverberation.

Appendix A

Cassette Evaluation Form Used by Teacher Evaluators

Minneapolis Public Schools

Cassette Evaluation by Teachers
Summer 1971

(1 - 2) Teacher Number ___ ___ (3 - 10)Cassette No._ _ _ _ _ _ _ _

Title_____

(11) Subject: (check one)

1_____Language Arts or Literature

2_____Social Studies

3_____Math

4_____Science

(12) Which of these supplementary materials were provided for use with this cassette: (check as many as apply)

1_____None

2_____Books or booklets

3_____books in classroom or library

4_____filmstrips

5_____manipulative materials

6_____pictures

7_____slides

8_____study sheets

9_____teacher guide

0_____transparency

(13) Did the player operate satisfactorily?

1_____Yes 2_____No

If No, comment:_____

_____

(14) Was this lesson:

1_____More appropriate for poor readers than for average or better than average readers? (A "poor" reader is a child who is one or more years below grade level)

2_____More appropriate for average or better than average readers than for poor readers

3_____Appropriate for good, poor and average readers alike

4_____Not appropriate for good, poor or average readers

Rate the cassette presentation by circling one rating for each of the statements listed below (items 14 - 25)

		Very Good	Good	Fair	Poor
(15)	The voice was clear	1	2	3	4
(16)	The voice was pleasant for children to listen to	1	2	3	4
(17)	The sound was good	1	2	3	4
(18)	The "pacing" of the materials presented was appropriate for the children	1	2	3	4
(19)	The presentation was of optimum length; neither too long nor too short	1	2	3	4
(20)	It provided sufficient "settling down" time at the beginning	1	2	3	4
(21)	The content was relevant for the children in my school	1	2	3	4
(22)	The content was interesting	1	2	3	4
(23)	The related materials were appropriate for the cassette presentation	1	2	3	4
(24)	It was appropriate for use with primary children	1	2	3	4
(25)	It was appropriate for use with intermediate children	1	2	3	4

---

(26) In your opinion, how effective would this lesson be to help severely disabled readers learn the subject presented?

1_____ Very effective

2_____ Effective

3_____ Of limited effectiveness

4_____ Worthless

(27) Compared with other instructional materials you have used, how would you rate this cassette for teaching the subject to disabled readers?

1_____ Most effective material I know of for this subject

2_____ More effective than most materials on this subject

3_____ About as effective as most other materials on this subject

4_____ Less effective than most materials on this subject

(28) How important is the skill, concept or information presented on this cassette for instruction in this subject?

1_____Crucial, can't do without it

2_____Very important

3_____Moderately important

4_____Not very important

5_____Trivial

(29) Did you use a headset for this presentation?

1_____Yes 2_____No

(30) What is your recommendation for this cassette presentation?

1_____Keep it as is

2_____Scrap it

3_____Keep it, but make the following changes: _____

_____

Do you have any other comments?_____

_____

Date_____

PLEASE DO NOT WRITE BELOW THIS LINE

---

(31) Source: 1 2 3

(32-33) Use: __ __

(34-37) Count ____ ____ ____ ____

Return to:
Research Division
Minneapolis Public Schools
807 N. E. Broadway

RWF:dm
6/18/71

Appendix B

Cassette Tape Recommendation Listed by Subject

Based on teachers ratings, these Cassette tapes are recommended for use with educationally disadvantaged children:

Language Arts

Primary

LA016	Listening: Sounds We Hear
LA023	Using Our Senses: The Blind Colt
LA372.05	Aim - Lesson 5
LA839	Big Bill The Duck
LA843	Flapsey Flopper Of The Farmyard
LA846	The Mean Old Elephant
LI500.03	The Snowy Day
LI500.04	How To Be A Nature Detective
LI500.06	The Case Of The Hungry Stranger
LI500.10	Caps For Sale
LI500.49	Bread And Jam For Frances
LI500.64	Curious George Gets A Medal

Intermediate

LA016	Listening: Sounds We Hear
LA023	Using Our Senses: The Blind Colt
LA030	Distinguishing Between Fact And Opinion: Leeuwenhoek And The Little Animals
LA355	Phonics Short Vowel i
LA350.02	Vowels Digraphs ie/ei
LA371.51	The Gift Of The Magi
LA606	Skills In Gathering Facts
LA713	Let's Write Letter To A Has Been
LA718.00	Let's Write It Backfired
LA802	Posttest Listening Skills
LA822	What Are You Doing?
LA824	Fact And Opinion - The Starry Grotto
LA848	On The Mountains
LI500.05	Mystery Player At Left End
LI500.25	Slot Car Racing
LI500.33	Runaway Slave - Harriet Tubman

Both Primary and Intermediate

LA009	Visualizing: The Gift
LA031	Pondy's Quiet Ride
LA351	Phonics Short Vowel a
LA353	Phonics Short Vowel e
LA801	Pre-Test Listening Skills
LA803	Auditory Discrimination - Sounds
LA804	Auditory Discrimination - Rhymes
LA827	Evil Spider
LA828	The White Snake
LA832	The Foolish Donkey
LA847	The Greedy Dog

Recommended Tapes (continued)

Language Arts

Both Primary and Intermediate (continued)

LI500.13 What Mary Jo Shared
LI500.35 Anatole
LI500.38 Benjie
LI500.60 The Emperor's New Clothes
LI500.61 The Steadfast Tin Soldier

Social Studies

Primary

Intermediate

SS040.03 Paint And Feather And Camouflage
SS040.11 Florida
SS040.12 Apollo 14
SS076.52 Captain Cook
SS200.01 Whels Across The Mainland - Plans Are Made
SS200.02 Wheels Across The Mainland - On The Way
SS200.03 Wheels Across The Mainland - Chicago
SS600 The Adventures Of Two Great Explorers
SS610 The Life Of The Voyager
SS611 The Great Carrying Place
SS626 The Stagecoach Business In Pioneer Minnesota
SS630.19 Blackmen And The Fur Trade With The Indians
SS651.06 Frederick Douglas
SS775.07 Learning To Use Maps
SS784.01 Black Elk
SS784.02 Chief Joseph
SS784.03 Sitting Bull
SS784.08 Chief-Hole-In-The-Day
SS784.17 Young Joseph (Nez Perce)
SS784.18 Sacagawea
SS784.21 American Indians - Religions
SS784.23 American Indians - After Columbus
SS784.24 The American Indians Growing Up
SS810.01 Fort Snelling

Both Primary and Intermediate

SS040.15 The Boy Who Sailed Around The World
SS062.62 The First Thanksgiving
SS100.00 Why Dogs And Cats Dislike Each Other
SS657.03 Lincoln's Birthday
SS768 Robert Goes Shopping
SS775.86 The New Home
SS775.87 Indians Of The Southwest - Pueblo Dwellers And An Apache Raid
SS784.11 Johnny Cash
SS784.20 American Indians - Arts And Culture
SS810.04 The Growth Of Minneapolis

Recommended Tapes (continued)

Mathematics

Primary

MA026.01 Set I Drawing Set

Intermediate

MA016	Fractions
MA063.40	Multiplication 0-9 (4 sec.) 100 Basic Facts
MA064.16	We Subtract Decimals
MA007	Multiplication 0-5 Simplified Succession
MA014	Changing The Terms Of Fractions
MA033	Division One Digit Divisor
MA039	Addition Of Fractions
MA057	Subtraction Of Whole Numbers
MA063.31	Multiplication 0-9 (1 sec.) 100 Basic Facts
MA064.02	We Learn To Write Decimals #1

Both Primary and Intermediate

MA063.27	Addition 0-9 (sec.) 100 Basic Facts
MA022	The Names Of Parts

Science

Primary

SC813 A Trip To The Autumn Woods

Intermediate

SC805	Let's Find Out About The Weather
SC002	The Thermometer Above Zero

Both Primary and Intermediate

SC806 Now We Know (Songs To Learn By)

These cassettes, are in need of modification before further use with educationally disadvantaged youth. (Appendix C gives suggestions for the kind of modification needed.)

Language Arts

Primary

LA610 Custard the Dragon

LA835 Cinderella

LI500.14 In The Forest

Intermediate

LA021 Recognizing Cause and Effect: The Upside-Down Animal

LA024 Visualizing: The Wolf Attack

LA372.09 Excellent - Lesson 9

LA708 Let's Write the Mean Song

LA718.08 Let's Write Fur, Feather, Fin

LA818 Cause and Effect - The Red Cross

Both Primary and Intermediate

LA302 Learning Phonics Syllables #2

Social Studies

Primary

SS784.31 Shingibiss

Intermediate

SS040.01 I Am The Old Explorer Come Travel With Me

SS040.05 Alaska - Hawaii

SS612 Fort Snelling Part I

SS613 Fort Snelling Part II

SS614 Fort Snelling Part III

SS621 Governing A Frontier City

Tapes to be Modified (continued)

Social Studies (continued)

Intermediate (continued)

SS627	Frontier Remedies And Supersitions
SS628	Life On A Pioneer Farm
SS630.00	William Marko and His Balloon
SS630.10	Changes In Minnesota Manufacturing Since 1839
SS630.18	The Beginnings of St. Paul
SS650.97	History - Seekers Of The Dream
SS657.04	George Washington - Frontier Colonel
SS819	Mexico: Visiting Mexico City
SS903	Lief Ericcson
SS908.01	The Theft Of Fire
SS908.02	Wolf Wisdom

Both Primary and Intermediate

None

Mathematics

Primary

None

Intermediate

MA010	Introduction to Percent
MA044	Problem Solving Parts Of A Problem
MA051	How To Read Line Graphs
MA806	390 Basic Facts Difficult Subtraction

Both Primary and Intermediate

MA015	Parts Of A Whole Fraction
MA021	What Is A Fraction?
MA024	Fifths, Sixths, Eighths
MA030	Subtraction Whole Number #1

Not Recommended

These Cassette tapes are not recommended for use with educationally disadvantaged youth because they are too difficult or are not suitable for use with primary or intermediate children:

Language Arts

LA003	Rashid And The Lion Trainer
LA008	Using Our Sense: Voices And Little Birds
LA018	Recognizing Sequence: The New Boy
LA027	Sharing Feeling: Mora And The Monsoon
LA366	Synonyms Section 2 New Ways In Composition

Science

SC101.02	Star Pictures #2
SC801	Let's Find Out What Makes Things Move
SC803	Let's Find Out About The Moon
SC807	Now We Know (Songs To Learn By)
SC004	Below Zero And The Boiling Point
SC022.61	Discovering Reptiles
SC101.01	Star Pictures #1

Mathematics

None

Social Studies

SS784.32	The Wild White Horse

Only one sample page of Appendix C is presented here because of its length and limited interest for most readers. The complete Appendix is available upon request. Contact the Research and Evaluation Department of the Minneapolis Public Schools.

Appendix C

Tables Showing Teacher Ratings for Individual Tapes by Subject Area [1]

[1] The exact wording used for the column evaluative criteria can be found in Appendix A which contains the rating instrument used by the teachers who evaluated the tapes. Rating instrument item numbers 15-22 and 26-28 correspond with the column criteria headings.

Grade level designations are listed by letters; i.e., primary (P), intermediate (I), both primary and intermediate (PI), and neither primary or intermediate (NPI). A mean rating of good or very good was required before a tape was rated as being suitable for primary and intermediate usage. Where a tape received a mean rating of good or very good for usage with both primary and intermediate grade levels it was given a PI rating. When a tape received a mean rating of less than good for both primary and intermediate grade levels it was given a NPI rating. Production source refers to the mode of production; i.e., whether produced by the Cassette Center (L), by a commercial enterprise (C), or by radio and other school districts (R).

The ratings of excellent, good, fair and poor correspond closely in meaning to the actual rating system used on the rating form (see items 26, 27, and 28 on the rating form listed in Appendix A) but because of space limitations it was necessary to leave out the exact rating wordage.

Table 20[a]

Number of Teacher Ratings by Evaluative Criteria for Language Arts Cassette Tapes

Cassette Number, Grade Level, Source of Production and Title[b]	Rating	Clear Voice	Pleasant Voice	Sound Quality	Pacing	Length of Presentation	Settling Time	Content Relevance	Interesting Content	Related Material	Helpful for Disabled Reader[c]	Compared to Other Materials[d]	Skill Importance[e]	Recommendations: Keep	Scrap	Modify	Rater's Comment
LA003 I C Title: Rashid and the Lion Trainer	Excellent	1	1					1						1	1	2	. Worksheets are difficult to read. Acetate cover sheets might be used over the original booklet.
	Good	2	2	2	2	3	2	2	2	2	1	1	4				
	Fair	1	1	1	1	1		1	2	1		2					
	Poor			1	1		2			1	3	1					
LA008 I C Title: Using Our Sense: Voices and Little Birds	Excellent	2	2	2				1					1	2		2	. Directions came at end of many presentations--should be direction to this effect at very beginning.
	Good	2	2	2	4	4	1	3	4	2	1	1	1				
	Fair						2				3	3	2				
	Poor						1			1							
LA009 PI C Title: Visualizing: The Gift	Excellent	2	2	1	3	3	2	3	3	2	2	1	1	2		2	
	Good	2	2	2	1	1	1	1	1	2	1	3	3				
	Fair						1				1						
	Poor			1													
LA016 I C Title: Listening: Sounds We Hear	Excellent	3	2	2	1	2	1	1	1	1	1			3			
	Good		1	1	2	1	1	2	2	1	2	3	1				
	Fair												2				
	Poor						1										
LA018 NPI C Title: Recognizing Sequence: The New Boy	Excellent	2	2	2			1								1	3	. Ch. read too fast for good comprehension (Questions 4-5). Child would have to be told which worksheet to use. . It begins and ends rather abruptly.
	Good	2	2	2	1	2		4	2	3		1	4				
	Fair				1	2	2		2	1	3	2					
	Poor				2		1				1	1					

[a,b,c,d,e] See Appendix C heading page for subscript description.

Minneapolis Public Schools

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